



WELLS FARGO

4252

ENVIRONMENTAL
PROTECTION
97 JUL 15 AM 9:06

Private Client Services
Specialty Assets - Real Estate

345 California Street, 10th Floor
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San Francisco, CA 94163
Fax (415) 983-0701

July 11, 1997

Blumert

Mr. Kevin Tinsley
Alameda County Health Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

Re: **Blumert Trust • Account #308-107222**
490 - 43rd Street/4300 Telegraph Avenue, Oakland, CA
Property #001156

Dear Mr. Tinsley:

Enclosed you will find a copy of the Quarterly Groundwater Monitoring Report for the captioned property.

The contact person at ACC Environmental Consultants is Dave DeMent (510) 638 - 8400.

Please contact the undersigned or Mr. DeMent if we can be of any further assistance.

Sincerely,

Jeffrey A. Hirsch
Assistant Vice President
and Senior Asset Manager
(415) 396 - 6743

cc Dave DeMent (w out encl)
Clarence Stump (w encl)
Cassandra Miller (w encl)
Ken Cheitlen, Esq (w out encl)



ENVIRONMENTAL
PROTECTION
97 JUL 15 AM 9: 04

GROUNDWATER MONITORING REPORT

July 2, 1997

490 43rd Street
Oakland, California

Prepared For:
Mr. Jeffrey A. Hirsch
Wells Fargo Trust

OAKLAND ▪ SACRAMENTO
SEATTLE ▪ LOS ANGELES

ACC Project No. 96-6305-001.01

GROUNDWATER MONITORING REPORT

490 43rd Street
Oakland, California

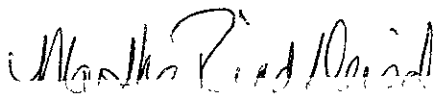
ACC Project No. 6305-001.01

Prepared for:

Mr. Jeffrey A. Hirsch
Wells Fargo Trust
525 Market Street, 18th Floor
San Francisco, California

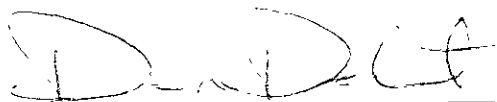
July 2, 1997

Prepared by:



Martha Rindfleisch
Technical Writer

Reviewed by:



David R. DeMent, RG
Senior Geologist

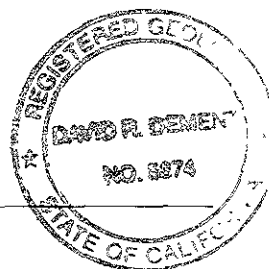


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GROUNDWATER MONITORING REPORT

490 43rd Street
Oakland, California

1.0 INTRODUCTION

Groundwater monitoring and sampling was conducted by ACC Environmental Consultants, Inc., (ACC) for Wells Fargo Trust on behalf of the Blumert Trust, for the subject property at 490 43rd Street, Oakland, California (Figure 1). Groundwater monitoring and sampling was conducted at the request of the Alameda County Health Care Services Agency, Department of Environmental Health (ACHCSA) for additional site investigation and characterization of impacted groundwater.

The purpose of the work was to monitor groundwater flow direction and gradient and evaluate the presence of petroleum hydrocarbons in the local groundwater associated with former gasoline and paint thinner (mineral spirits) underground storage tanks (USTs) prior to the proposed introduction of oxygen releasing compound (ORC®) at the site. The locations of the groundwater monitoring wells and pertinent site features are illustrated on Figure 2.

2.0 BACKGROUND

The site is located at the northeastern corner of Telegraph Avenue and 43rd Street, Oakland, California (Figure 2). The property is relatively flat, at an elevation of approximately 90 feet above mean sea level (MSL). The predominant groundwater flow direction is to the south-southwest.

The facility formerly operated one 1,000-gallon gasoline UST and one 350-gallon mineral spirit UST, which were removed on December 11, 1991 (Figure 2). Laboratory analysis of soil samples collected underneath the gasoline tank indicated concentrations up to 220 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHg) and minor concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX). Laboratory analysis of soil samples collected underneath the mineral spirit tank indicated concentrations up to 25 ppm mineral spirits. Groundwater was observed in the excavation at a depth of approximately 12.5 feet below ground surface (bgs). The tank pit, which contained both former USTs, was overexcavated on March 31, 1992, to remove additional impacted soil. Laboratory analysis of soil samples collected from excavation sidewalls indicated concentrations up to 720 ppm TPHg, 30 ppm BTEX constituents, and 190 ppm mineral spirits.

Three groundwater monitoring wells were installed on April 12, 1993, by Kaprealian Engineering, Inc., (KEI) and have been monitored periodically since that time. Gradient has been calculated at approximately 0.01 foot/foot and flow direction has consistently been to the south-southwest. Groundwater samples collected from the three groundwater monitoring wells have indicated elevated TPHg and mineral spirit concentrations

On June 1, 1994, KEI drilled exploratory soil borings EB1 and EB2. Concentrations of TPHg and mineral spirits were detected in soil samples collected from boring EB2 at depths of 10 and 12 feet bgs ranging from 28 to 180 ppm. Grab groundwater samples collected from borings EB1 and EB2

indicated concentrations of TPHg at 3,400 parts per billion (ppb) and 9,200 ppb, respectively, and mineral spirits at 7,000 ppb and 3,700 ppb, respectively. Sieve analysis of saturated soil at the site determined the soil should be classified as silty sand (SM).

To further evaluate the extent of hydrocarbon impact to soil and groundwater, ACC performed an exploratory boring investigation in April 1996. ACC drilled two exploratory soil borings (SB1 and SB2) to characterize soil conditions in the immediate vicinity of the former tank excavation and six additional exploratory borings (B3 through B8) upgradient and downgradient of the former USTs to characterize groundwater in the general vicinity of the former tank excavation. Concentrations of mineral spirits were detected in sample SB1-9.0 at 52 ppm and in sample SB2-9.0 at 78 ppm. Grab groundwater samples were collected from borings B3 through B8 and analyzed for TPHg, BTEX, and mineral spirits. Concentrations of TPHg ranged from nondetectable in samples collected from borings B3 and B8 to 46,000 ppb in boring B6. Concentrations of mineral spirits ranged from nondetectable in samples collected from borings B3 and B8 to 16,000 ppb in boring B7. Petroleum hydrocarbon impacts to shallow groundwater were not fully delineated, but concentrations of TPHg and mineral spirits appear to have migrated preferentially along utility trench lines. General aquifer quality appears to be poor, and subsurface groundwater migration is believed to be minimal based on soil type, flat hydraulic gradient, and minimal surface water infiltration.

In a letter to Wells Fargo Bank dated October 17, 1996, ACHCSA approved biannual groundwater monitoring, the installation of one additional monitoring well, and evaluating options to artificially introduce dissolved oxygen (DO) into shallow groundwater to assist natural bioremediation processes. Agreement on the necessity of an additional well, the well location, and method of introducing DO into groundwater has not been made.

3.0 GROUNDWATER MONITORING AND SAMPLING

ACC monitored and sampled wells MW-1 through MW-3 on June 12, 1997. This sampling event was performed to characterize groundwater conditions prior to the proposed use of ORC® at the site. Work at the site included measuring depth to water, subjectively evaluating groundwater in the wells, measuring groundwater parameters such as pH, temperature, conductivity, and DO, and purging and sampling the wells for laboratory analysis.

3.1 Groundwater Monitoring

Before groundwater sampling, the depth to the surface of the water table was measured from the top of the well casing using a Solinst water level meter. The water level measurements were recorded to the nearest 0.01 foot with respect to MSL. Groundwater monitoring data obtained at the site is included as Appendix 1. Information regarding well elevations and groundwater levels is summarized in Table 1.

TABLE 1 - GROUNDWATER MONITORING DATA

Well Number (Well Elevation)	Date	Depth to Water*	Groundwater Elevation
MW-1 (91.02')	04/14/94	11.19	79.83
	05/23/94	10.75	80.27
	06/16/94	11.72	79.30
	04/12/95	9.72	81.31
	05/10/95	10.11	80.91
	06/28/95	10.91	80.11
	12/05/95	12.21	78.81
	05/30/96	10.23	80.79
	09/03/96	12.10	78.92
	12/06/96	9.32	81.70
	06/12/97	11.85	79.17
MW-2 (90.55')	04/14/94	10.95	79.60
	05/23/94	10.52	80.03
	06/16/94	11.49	79.06
	04/12/95	9.59	80.96
	05/10/95	10.00	80.55
	06/28/95	10.95	79.60
	12/05/95	12.34	78.21
	05/30/96	10.01	80.54
	09/03/96	11.87	78.68
	12/06/96	9.42	81.13
06/12/97	11.65	78.90	
MW-3 (90.90')	04/14/94	11.23	79.67
	05/23/94	10.74	80.16
	06/16/94	11.81	79.09
	04/12/95	9.72	81.18
	05/10/95	10.16	80.74
	06/28/95	10.99	79.91
	12/05/95	12.39	78.51
	05/30/96	9.97	80.93
	09/03/96	12.40	78.50
	12/06/96	9.12	81.78
06/12/97	11.86	79.04	

Notes * Depth to water measured in feet below top of casing
(91.02') = Surveyed elevations to the top of the well casing

3.2 Groundwater Gradient

The groundwater flow direction as determined from monitoring well data collected on June 12, 1997, is illustrated on Figure 3. Based on groundwater elevation calculations, groundwater flow is predominantly toward the south-southwest at an average gradient of 0.012 foot/foot. Historic groundwater gradient at the site is summarized in Table 2.

TABLE 2 - GROUNDWATER GRADIENT AND FLOW DIRECTION

Date Monitored	Average Gradient (foot/foot)	Direction
04/14/94	0.007	south
05/23/94	0.008	south
06/16/94	0.007	south
04/12/95	0.010	south-southwest
05/10/95	0.011	south-southwest
06/28/95	0.010	south-southwest
12/05/95	0.020	south-southwest
05/30/96	0.014	southwest
09/03/96	0.012	southeast
12/06/96	0.036	southwest
06/12/97	0.012	south-southwest

3.3 Groundwater Sampling

Prior to groundwater sampling, each well was purged using a disposable polyethylene bailer. ACC measured pH, DO, conductivity, temperature, salinity, and turbidity during well purging. When temperature, pH, and conductivity of the water stabilized and a minimum of four well casing volumes of water had been removed from each well, groundwater samples were collected. Following purging, each well was allowed to recharge before sampling.

Wells were sampled using a new, disposable polyethylene bailer attached to new string. From each monitoring well, laboratory supplied sample vials and bottles were filled to overflowing and sealed so that no air was trapped in the vial or bottle. Once filled, vials were inverted and tapped to test for air bubbles. Sample containers were labeled with self-adhesive, pre-printed tags. All samples were stored in pre-chilled, insulated containers pending delivery to a state-certified laboratory for analysis.

Water purged during the development and sampling of the monitoring wells was temporarily stored on site in Department of Transportation approved 55-gallon drums pending receipt of laboratory analytical results and proper disposal.

4.0 RESULTS OF GROUNDWATER SAMPLING

Groundwater samples collected from groundwater monitoring wells MW-1 through MW-3 were submitted to Chromalab Inc., in Pleasanton, California, following chain of custody protocol. Groundwater samples collected from the wells were analyzed for TPHg, BTEX, and methyl tertiary butyl ether (MTBE) using Method SW846 8020A Nov 1990/8015M, and total extractable petroleum hydrocarbons as mineral spirits (TEPH as mineral spirits) using EPA Method 8015M. A copy of the chain of custody record and laboratory analytical reports is included as Appendix 2. Groundwater sample analytical results are summarized in Table 3.

TABLE 3 - GROUNDWATER SAMPLE ANALYTICAL RESULTS

Well / Date	Mineral Spirits	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-1							
04/29/93	600	290	31	1.9	2.7	5.4	--
12/13/93	820	1,700	170	22	19	48	--
03/15/94	1,200	2,100	250	12	27	38	--
06/16/94	430	700	35	6.8	8.7	10	--
09/13/94	73	170	6.6	1.6	2.4	3.3	--
12/08/94	170	420	16	3.0	2.9	2.7	--
03/14/95	65	630	39	ND	7.0	8.6	--
06/28/95	130	720	100	7.8	23	32	--
10/13/95	900	290	8.6	0.55	2.8	1.4	--
12/05/95	70	94	5.6	ND	0.67	0.53	--
05/30/96	<50	1,700 ⁽¹⁾	62	<0.5	16	18	<5
09/03/96	<50	570	1.8	0.61	8.5	7.3	<5
12/06/96	<51	2,600	84	2.8	30	23	
06/12/97	<51	580	9.4	1.3	5.0	4.0	8.1

Well / Date	Mineral Spirits	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-2							
04/29/93	4,100	11,000	2,400	51	76	160	--
12/13/93	2,600	11,000	1,400	66	150	94	--
06/16/94	11,000	18,000	2,100	ND	200	70	--
09/13/94	5,400	12,000	1,400	50	200	89	--
12/08/94	3,200	11,000	1,700	34	200	86	--
03/14/95	670	14,000	1,500	41	160	66	--
06/28/95	8,700	11,000	1,700	ND	230	78	--
10/13/95	1,500	9,400	1,200	41	200	61	--
12/05/95	24,000	150,000	890	200	720	500	--
05/30/96	< 50	10,000 ⁽¹⁾	61	5.1	28	11	< 5 ⁽²⁾
09/03/96	< 50	7,400	960	19	130	37	< 100 ⁽²⁾
09/03/96 ⁽³⁾	2,800	7,800	1,400	< 0.5	210	91	300
12/06/96	< 54	12,000	850	8	140	36	
06/12/97	< 50	5,100	810	25	6.8	13	< 5
MW-3							
04/29/93	5,800	8,500	840	17	40	42	--
12/13/93	3,500	6,200	580	120	65	120	--
06/16/94	4,700	7,700	910	ND	86	50	--
09/13/94	8,700	6,800	430	14	45	37	--
12/08/94	2,100	1,500	820	ND	52	28	--
03/14/95	480	5,600	250	11	25	30	--
06/28/95	2,100	14,000	650	18	70	54	--
10/13/95	430	2,500	270	1.9	15	10	--
12/05/95	5,400	4,200	250	ND	26	ND	--
05/30/96	< 50	5,300 ⁽¹⁾	65	1.5	9.0	5.1	< 5 ⁽²⁾
09/03/96	< 50	8,900	460	17	51	77	< 25 ⁽²⁾
09/03/96 ⁽³⁾	7,100	4,800	800	14	39	39	120
12/06/96	< 100	7,000	740	< 5	60	17	--
06/12/97	< 50	2,800	460	14	59	28	< 50

Notes: All water results are reported in µg/L = ppb
 < = Not detected at laboratory reporting limit indicated (see analytical report)
 -- = Analysis not performed
⁽¹⁾ Value revised by Chromalab from May 1996. submission 9605835
⁽²⁾ Confirmed by gas chromatography/mass spectrometry (GC/MS)
⁽³⁾ Duplicate sample analysis by Sequoia Analytical

5.0 DISCUSSION

Three groundwater monitoring wells are located at the site in proximity to the former USTs. Groundwater gradient and flow direction were 0.012 foot/foot to the south-southeast, respectively, in June 1997. These values are consistent with the majority of previous sampling events, but seasonal variations in gradient and flow direction have been observed at the site. Since September 1996, groundwater elevation decreased in the three wells from 2.23 to 2.74 feet due to the lack of recent precipitation.

The three groundwater monitoring wells were monitored and sampled for gasoline and mineral spirit constituents. The June 12, 1997, sampling event indicates that the concentrations of TPHg decreased in all three monitoring wells.

In the initial sampling events, from April 1993 to December 1994, concentrations of dissolved gasoline constituents did not appear to correspond with fluctuations in groundwater elevation. Since May 1996, there has been good correspondence between groundwater elevation changes and changes in concentrations of gasoline constituents in groundwater. In addition, concentrations of gasoline constituents increased after abrupt, seasonal changes in gradient in December 1995 and December 1996. This correspondence is normally observed at sites with similar hydrogeological conditions and a residual source of petroleum hydrocarbons in soil.

Groundwater analytical results indicate generally decreasing concentrations of petroleum hydrocarbon constituents. Analysis of analytical chromatograms indicate that the majority of the constituents resemble a gasoline profile and the analytical laboratory takes precautions to report the appropriate concentrations in groundwater samples without "double counting" constituents in the range of overlap between gasoline and mineral spirits. Since May 1996, only gasoline constituents have been reported in groundwater samples.

5.1 Dissolved Oxygen

DO levels in wells MW-1 through MW-3 appear to vary with the degree of groundwater recharge and fluctuations in groundwater elevation. Past DO levels have ranged from 0.4 to 1.0 ppm and DO levels on June 12, 1997, ranged from approximately 2.0 to 3.4 ppm. DO in upgradient well MW-1 was 2.8 to 3.4 ppm and DO levels in downgradient wells MW-2 and MW-3 ranged from 2.0 to 2.4 ppm. The DO level is higher in upgradient well MW-1 than in the two downgradient wells, indicating DO is being utilized in the biodegradation of petroleum hydrocarbons.

A low DO level is considered the limiting factor in bioremediation degradation of petroleum hydrocarbons. Using ORC® will effectively remove this limiting factor and decreased concentrations of petroleum hydrocarbons should result. ORC® dissolves slowly, releasing oxygen into groundwater which enhances natural bioremediation processes and increases degradation of petroleum hydrocarbon compounds. DO migrates by diffusion in areas with negligible groundwater velocity and is actively transported with groundwater in zones of preferential

movement. ACC believes that DO transport in groundwater can be monitored and evaluated using existing well MW-2.

6.0 CONCLUSIONS

Based on results of 14 sampling events and ACC's fourth consecutive sampling and monitoring event, we conclude the following:

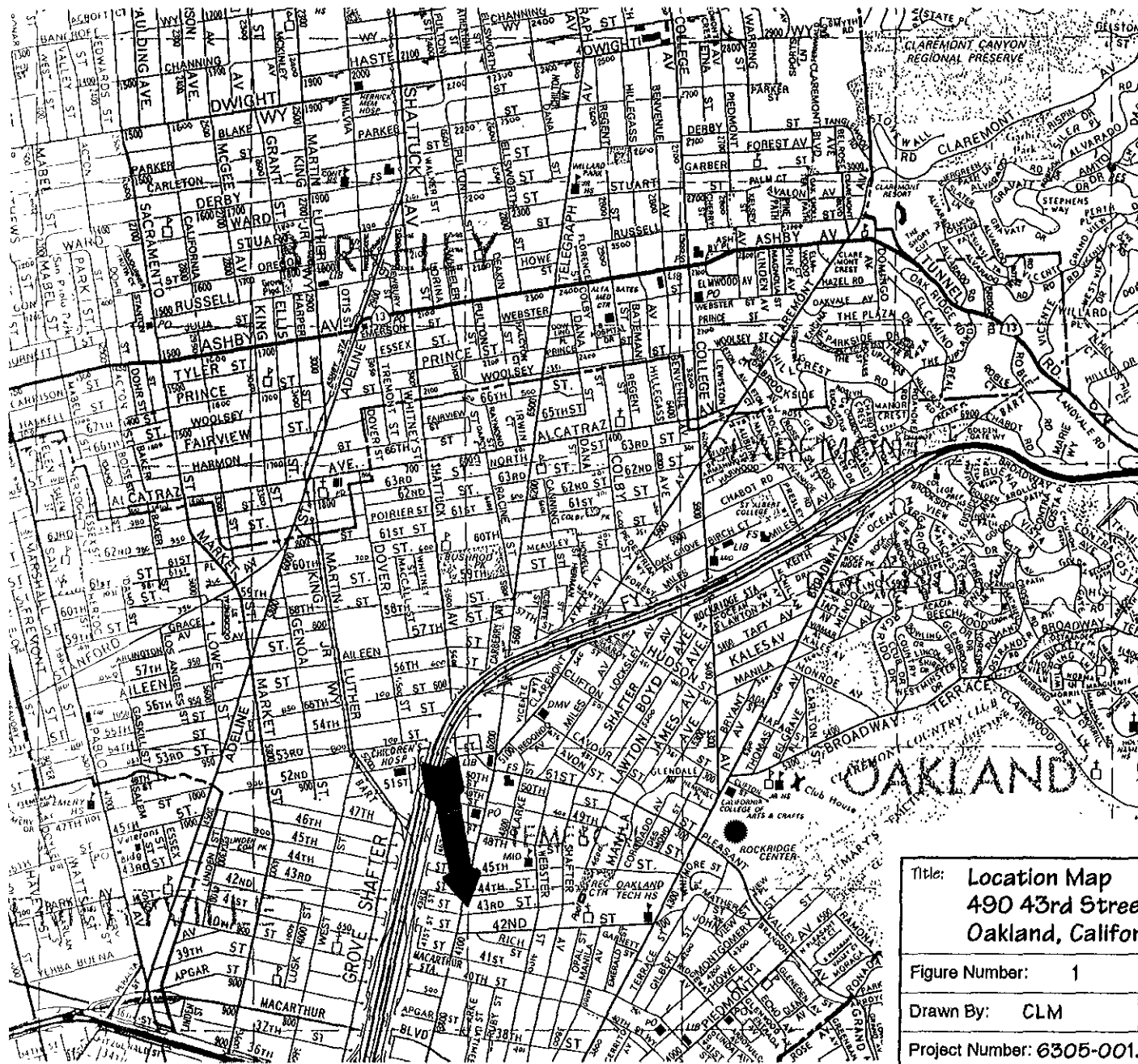
- Dissolved TPHg and BTEX continue to be detected in groundwater in the immediate vicinity of wells MW-1 through MW-3 and the ongoing presence of these constituents appears to be due to periodic contact between fluctuating groundwater and residual concentrations in soil;
- Groundwater flow direction was calculated to the south-southwest at a gradient of 0.012 and these values are consistent with average values for the site; and
- Concentrations of dissolved gasoline constituents continue to fluctuate and impact to groundwater continues to decline through natural bioremedial processes.

7.0 RECOMMENDATIONS

Groundwater monitoring and sampling data has characterized groundwater conditions at the site. Natural bioremedial processes are slowly degrading petroleum hydrocarbon residues and these processes can be assisted by introducing DO. Therefore, ACC recommends the following:

- Artificially introduce DO via ORC® into shallow groundwater utilizing monitoring wells MW-1 and MW-3 to stimulate natural bioremediation processes;
- Measure the DO level in well MW-2 during the next monitoring event to evaluate the DO level and DO migration potential;
- Submit a Work Plan regarding ORC® introduction for approval by the ACHCSA; and
- Continue biannual well monitoring and sampling for one year to further characterize groundwater conditions, monitor DO levels, confirm decreasing concentrations of gasoline constituents, and evaluate the site for regulatory closure and "no further action" status.

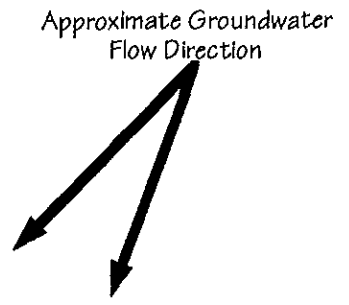
ACC would like to introduce ORC® by August 1, 1997, and requests that the ACHCSA respond to the recommendations in this report by July 15, 1997. The next sampling event is scheduled for December 1997.



Source: Thomas Brothers Guide, 1990 ed.

Title: Location Map 490 43rd Street Oakland, California	
Figure Number: 1	Scale: None.
Drawn By: CLM	Date: 6/25/97
Project Number: 6305-001.01	
<p>ACC Environmental Consultants 7977 Capwell Drive, Suite 100 Oakland, California 94621 (510) 638-8400 Fax: (510) 638-8404</p>	

TELEGRAPH AVENUE



EXISTING BUILDING

EXISTING BUILDING

LOADING DOCK

EQUIPMENT STORAGE

ASPHALT SURFACE

ENCLOSURE

Storm Sewer

Former Excavation Boundary

SIDEWALK

6" Water Line

43RD STREET

Gas Line

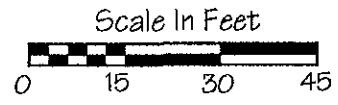
Storm Sewer

Former 1,000-Gallon Gasoline UST (489 43rd Street)

Former 350-Gallon Paint Thinner UST

Legend

- MW-2 - Existing Groundwater Monitoring Well
- B4 - ACC Soil Boring Location (April 16, 1996)
- EB2 - Kaprealian Engineering Boring Location
- Former Underground Storage Tank



Title: Site Plan 490 43rd Street Oakland, California	
Figure Number: 2	Scale: 1" = 30'
Drawn By: JVC/DRD	Date: 6/24/97
Project Number: 6305-1.1	
ACC Environmental Consultants 7977 Capwell Drive, Suite 100 Oakland, California 94621 (510) 638-8400 Fax: (510) 638-8404	

TELEGRAPH AVENUE

EXISTING BUILDING

LOADING DOCK

EQUIPMENT STORAGE

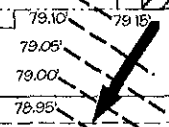
ASPHALT SURFACE

EXISTING BUILDING

(79.17')
MW-1

MW-2
(78.90')

MW-3
(79.04')



Storm Sewer

SIWALK

6" Water Line




43RD STREET

Gas Line

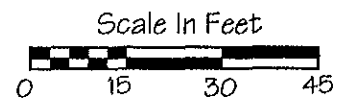
Storm Sewer

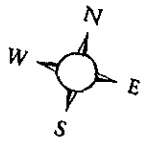
Former 1,000-Gallon Gasoline UST (489 43rd Street)

Legend

- MW 2  - Existing Groundwater Monitoring Well
-  - Calculated Groundwater Flow Direction
-  - Calculated Groundwater Elevation Contour

Groundwater Elevation Data collected on June 12, 1997



Title: Gradient Map 490 43rd Street Oakland, California	
Figure Number: 3	Scale: 1" = 30"
Drawn By: JVC/DRD	Date: 6/23/97
Project Number: 6305-1.1	
ACC Environmental Consultants 7977 Capwell Drive, Suite 100 Oakland, California 94621 (510) 638-8400 Fax: (510) 638-8404	
	

WELL MONITORING WORKSHEET

JOB NAME: Blument Trust PURGE METHOD: MANUAL Bailing
 SITE ADDRESS: 490 43rd Street SAMPLED BY: D. DeMent
 JOB #: 6305-001.01 LABORATORY: Chromalab
 DATE: 6/12/97 ANALYSIS: TPHg/BTEX/MTBE/Min. Spirits
 Onsite Drum Inventory SOIL: Ø MONITORING DEVELOPING
 EMPTY: WATER: 1/3 SAMPLING

	PURGE	PURGE WATER READINGS							OBSERVATIONS
	VOLE.	pH	Temp.(C)	Cond.	Sal.	Turb.	D.O.		
WELL: <u>MW-1</u>	(Gal)							<input type="checkbox"/> Froth	
DEPTH OF BORING: <u>22.54'</u>	<u>1.8</u>	<u>6.50</u>	<u>20.1</u>	<u>0.502</u>	<u>0.02</u>	<u>10</u>	<u>3.40</u>	<input type="checkbox"/> Sheen	
DEPTH TO WATER: <u>11.85'</u>	<u>3.6</u>	<u>6.43</u>	<u>20.1</u>	<u>0.463</u>	<u>0.01</u>	<u>303</u>	<u>2.80</u>	<input checked="" type="checkbox"/> Odor ^{slight} Type <u>Petroleum</u>	
WATER COLUMN: <u>10.69'</u>	<u>5.4</u>	<u>6.41</u>	<u>19.7</u>	<u>0.449</u>	<u>0.01</u>	<u>463</u>	<u>3.12</u>	<input type="checkbox"/> Free Product	
WELL DIAMETER: <u>2"</u>	<u>7.2</u>	<u>6.43</u>	<u>19.6</u>	<u>0.448</u>	<u>0.01</u>	<u>872</u>	<u>2.89</u>	Amount _____ Type _____	
WELL VOLUME: <u>1.8 gal</u>								<input checked="" type="checkbox"/> Other	
COMMENTS: <u>Sampled 13:40</u>								<u>Water cloudy</u>	
WELL: <u>MW-2</u>	(Gal)	pH	Temp.(C)	Cond.	Sal.	Turb.	D.O.	<input type="checkbox"/> Froth	
DEPTH OF BORING: <u>21.20'</u>	<u>1.7</u>	<u>6.50</u>	<u>19.9</u>	<u>0.483</u>	<u>0.02</u>	<u>210</u>	<u>2.38</u>	<input checked="" type="checkbox"/> Sheen	
DEPTH TO WATER: <u>11.65'</u>	<u>3.4</u>	<u>6.48</u>	<u>19.9</u>	<u>0.484</u>	<u>0.02</u>	<u>314</u>	<u>2.30</u>	<input checked="" type="checkbox"/> Odor Type <u>Petroleum</u>	
WATER COLUMN: <u>9.55'</u>	<u>5.1</u>	<u>6.45</u>	<u>19.8</u>	<u>0.484</u>	<u>0.02</u>	<u>325</u>	<u>2.41</u>	<input type="checkbox"/> Free Product	
WELL DIAMETER: <u>2"</u>	<u>6.8</u>	<u>6.45</u>	<u>19.8</u>	<u>0.482</u>	<u>0.02</u>	<u>410</u>	<u>2.25</u>	Amount _____ Type _____	
WELL VOLUME: <u>1.7</u>								<input checked="" type="checkbox"/> Other	
COMMENTS: <u>Sampled 14:30</u>								<u>Water cloudy</u>	
WELL: <u>MW-3</u>	(Gal)	pH	Temp.(C)	Cond.	Sal.	Turb.	D.O.	<input type="checkbox"/> Froth	
DEPTH OF BORING: <u>21.58'</u>	<u>1.7</u>	<u>6.44</u>	<u>20.4</u>	<u>0.485</u>	<u>0.02</u>	<u>240</u>	<u>2.40</u>	<input type="checkbox"/> Sheen	
DEPTH TO WATER: <u>11.86'</u>	<u>3.4</u>	<u>6.42</u>	<u>19.9</u>	<u>0.499</u>	<u>0.02</u>	<u>999</u>	<u>2.51</u>	<input checked="" type="checkbox"/> Odor Type <u>petroleum</u>	
WATER COLUMN: <u>9.72'</u>	<u>5.1</u>	<u>6.42</u>	<u>19.8</u>	<u>0.502</u>	<u>0.02</u>	<u>999</u>	<u>2.01</u>	<input type="checkbox"/> Free Product	
WELL DIAMETER: <u>2"</u>	<u>6.8</u>	<u>6.41</u>	<u>19.7</u>	<u>0.506</u>	<u>0.02</u>	<u>999</u>	<u>1.97</u>	Amount _____ Type _____	
WELL VOLUME: <u>1.7</u>								<input checked="" type="checkbox"/> Other	
COMMENTS: <u>Sampled 14:05</u>								<u>Water cloudy</u>	

ANALYTICAL RESULTS AND CHAIN OF CUSTODY RECORD

CHROMALAB, INC.

Environmental Services (SDB)

June 19, 1997

Submission #: 9706147

ACC ENVIRONMENTAL CONSULTANTS

Atten: David DeMent

Project: 490 43RD STREET
Received: June 12, 1997

Project#: 6305-001.01

re: One sample for TEPH analysis.
Method: EPA 8015M


Client Sample ID: MW-1
Spl#: 135537
Sampled: June 12, 1997

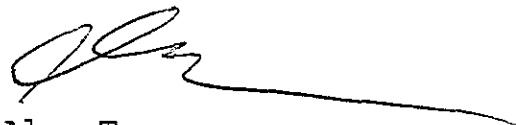
Matrix: WATER
Run#: 7315

Extracted: June 17, 1997
Analyzed: June 18, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
MINERAL SPIRITS	N.D.	51	N.D.	--	1

NOTE: Quantitation for the above Analyte is based on the response factor of Diesel.


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

June 19, 1997

Submission #: 9706147

ACC ENVIRONMENTAL CONSULTANTS

Atten: David DeMent

Project: 490 43RD STREET
Received: June 12, 1997

Project#: 6305-001.01

re: One sample for TEPH analysis.
Method: EPA 8015M


Client Sample ID: MW-2
Spl#: 135538
Sampled: June 12, 1997

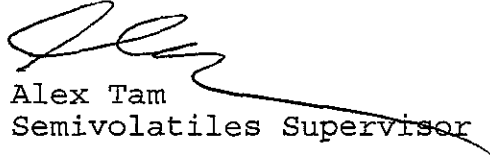
Matrix: WATER
Run#: 7315

Extracted: June 17, 1997
Analyzed: June 18, 1997

<u>ANALYTE</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u> (ug/L)	<u>BLANK</u> <u>RESULT</u> (ug/L)	<u>BLANK</u> <u>SPIKE</u> (%)	<u>DILUTION</u> <u>FACTOR</u>
MINERAL SPIRITS	N.D.	50	N.D.	--	1

NOTE: Quantitation for the above Analyte is based on the response factor of Diesel.


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

June 19, 1997

Submission #: 9706147

ACC ENVIRONMENTAL CONSULTANTS

Atten: David DeMent

Project: 490 43RD STREET
Received: June 12, 1997

Project#: 6305-001.01

re: One sample for TEPH analysis.
Method: EPA 8015M

Client Sample ID: MW-3

Spl#: 135539

Matrix: WATER

Extracted: June 17, 1997


Sampled: June 12, 1997

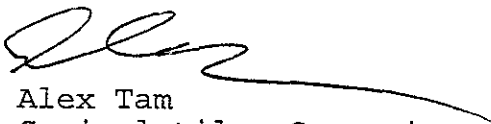
Run#: 7315

Analyzed: June 18, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
MINERAL SPIRITS	N.D.	50	N.D.	--	1

NOTE: Quantitation for the above Analyte is based on the response factor of Diesel.


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

June 19, 1997

Submission #: 9706147

ACC ENVIRONMENTAL CONSULTANTS

Atten: David DeMent

Project: 490 43RD STREET
Received: June 12, 1997

Project#: 6305-001.01

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW-1

Spl#: 135537


Matrix: WATER

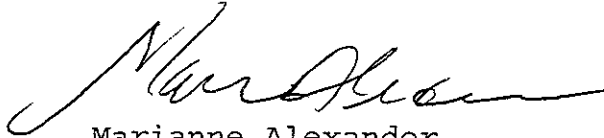
Sampled: June 12, 1997

Run#: 7337

Analyzed: June 17, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	580	50	N.D.	85	1
MTBE	8.1	5.0	N.D.	93	1
BENZENE	9.4	0.50	N.D.	117	1
TOLUENE	1.3	0.50	N.D.	116	1
ETHYL BENZENE	5.0	0.50	N.D.	116	1
XYLENES	4.0	0.50	N.D.	112	1


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

June 19, 1997

Submission #: 9706147

ACC ENVIRONMENTAL CONSULTANTS

Atten: David DeMent

Project: 490 43RD STREET
Received: June 12, 1997

Project#: 6305-001.01

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW-2

Spl#: 135538


Matrix: WATER


Sampled: June 12, 1997

Run#: 7337

Analyzed: June 18, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
MTBE	N.D.	5.0	N.D.	93	1
TOLUENE	25	0.50	N.D.	116	1
ETHYL BENZENE	6.8	0.50	N.D.	116	1
XYLENES	13	0.50	N.D.	112	1
GASOLINE	5100	500	N.D.	85	10
BENZENE	810	5.0	N.D.	117	10


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

510-638-8404

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

PM V132 O: BTEXQC0220
ALEXANDM '8 40

CHROMALAB, INC.

Environmental Services (SDB)

June 19, 1997

Submission #: 9706147

ACC ENVIRONMENTAL CONSULTANTS

Atten: David DeMent

Project: 490 43RD STREET
Received: June 12, 1997

Project#: 6305-001.01

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW-3

Spl#: 135539

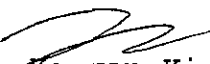
Matrix: WATER

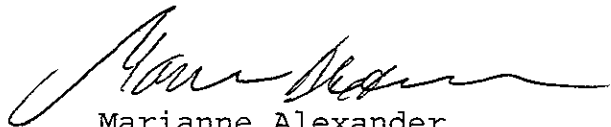
Sampled: June 12, 1997

Run#: 7337

Analyzed: June 18, 1997

<u>ANALYTE</u>	<u>RESULT</u> <u>(ug/L)</u>	<u>REPORTING</u> <u>LIMIT</u> <u>(ug/L)</u>	<u>BLANK</u> <u>RESULT</u> <u>(ug/L)</u>	<u>BLANK</u> <u>SPIKE</u> <u>(%)</u>	<u>DILUTION</u> <u>FACTOR</u>
GASOLINE	2800	500	N.D.	85	10
MTBE	N.D.	50	N.D.	93	10
BENZENE	460	5.0	N.D.	117	10
TOLUENE	14	5.0	N.D.	116	10
ETHYL BENZENE	59	5.0	N.D.	116	10
XYLENES	28	5.0	N.D.	112	10


Kayvan Kimyai
Chemist


Marianne Alexander
Gas/BTEX Supervisor

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(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

PMV1320:BTEXQC0220
ALEXANDM 18 40

CHROMALAB, INC.

Environmental Service (SDB)

Sample Receipt Checklist

Client Name: ACC ENVIRONMENTAL CONSULTANTS Date/Time Received: 06/12/97 | 1547

Reference/Submis: 34165 9706147 Received by: BM

Checklist completed by: Chris Pauley 6/13/97 Reviewed by: AM 6/13

Matrix: H₂O Carrier name: Client C/L

- Shipping container/cooler in good condition? Yes No Not Present
 - Custody seals intact on shipping container/cooler? Yes No Not Present
 - Custody seals intact on sample bottles? Yes No Not Present
 - Chain of custody present? Yes No
 - Chain of custody signed when relinquished and received? Yes No
 - Chain of custody agrees with sample labels? Yes No
 - Samples in proper container/bottle? Yes No
 - Sample containers intact? Yes No
 - Sufficient sample volume for indicated test? Yes No
 - All samples received within holding time? Yes No
 - Container/Temp Blank temperature in compliance? Temp: 5.5°C Yes No
 - Water - VOA vials have zero headspace? No VOA vials submitted Yes No
 - Water - pH acceptable upon receipt? yes Adjusted? Checked by CR chemist for VOAs
- Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

